

LITTER

and the Public Health

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THE FIRST street cleaning department in America was established in Philadelphia in 1750 by Benjamin Franklin, according to the American Public Health Association. Some 200 years later, in 1953, Keep America Beautiful was incorporated in New York City; it is the first national organization specifically set up to combat litter.

The growing litter menace had for some time been the concern of many kinds of national and local, official and voluntary organizations. Several of them were already valiantly fighting uncoordinated uphill battles to clean up our highways, streets, streams, parks, lakes, and beaches. These individual efforts brought temporary improvement here and there, but Keep America Beautiful undertook to wage continuous warfare on a national scale, emphasizing a new concept: the concept of prevention. This approach to the problem was designed to reduce the litter and therefore the enormous cost of cleanup and collection. It may be expected to produce more lasting results.

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The campaign against litter is a campaign against soil and water pollution. Early public health programs against indiscriminate pollution of soil and water with body wastes first emphasized the need for collection of these wastes (privies). Later, public health workers became concerned with transportation (sewerage). Refuse disposal was in general tackled in reverse order. Only lately have their efforts focused on the problem of getting the refuse properly accumulated in the first place. Litter might be defined as unaccumulated refuse, so the campaign against litter is in effect a campaign for the accumulation of rubbish at central points from which it may be more economically collected for transportation and disposal.

When environments are untidy, the health department is usually blamed, even though policing the environment may not be its responsibility. Every health department must therefore concern itself with the prevention of litter if for no other reason than to win public support for its whole program. In addition, however, public health workers have a direct stake in litter prevention as a way of reducing disease and accidents.

Rubbish promotes the breeding of rats, flies, and mosquitoes. It causes accidents, particu-

larly on highways. Cars swerve to avoid rubbish. Tires are cut, causing blowouts. Paper blows against windshields, obscuring vision at a critical moment. Reflections at night from a piece of glass or metal may be confused with the reflection from a traffic marker or mistaken for the eye of an animal. In the *Milwaukee Journal* of December 8, 1957, the Associated Press reported an estimate of 750 to 1,000 persons killed and 100,000 injured each year as a result of striking or swerving to avoid objects on highways. Refuse on beaches, in lakes and streams, in swimming pools, and in parks and playgrounds can cause cuts and abrasions which sometimes result in serious infections, and refuse on sidewalks and steps causes falls. Un-collected rubbish is the source of many fires, some of which cause injury and death. Litter in a lake or river can puncture the hull of a boat traveling at high speed, or damage a rudder or propeller. Such accidents can be the precursor of death.

There are also other attributes of litter. Dr. Justin M. Andrews, at the third annual conference of the Keep America Beautiful Advisory Committee in New York City in 1956, pointed out that "litter is frequently the surface symptom of a diseased environment." When the sanitarian sees this symptom he must be as concerned about seeking and removing the cause as the physician is about seeking the cause of a rash on the body. Here one might ask, what is the cause of litter? Is there an epidemiology of litter?

Without doubt, one cause of litter is mass production which makes it cheaper to discard and replace than to repair or re-use many things. Other causes are modern sanitary packaging, increased leisure time, increased mobility, and a food supply so abundant that we can waste much food. It is a wry thought that many of the attributes of a higher level of consumption are the very things which are impairing our health and the esthetic quality of our environment.

But there are additional causes. Some of the obvious ones are the lack of adequate trash receptacles at convenient points and infrequent and careless collections. But perhaps there are deeper causes as well. There would seem to be

some evidence that littering is communicable. For example, a beach, park, or highway which is already littered invites more litter. If some members of a family are in the habit of littering, other members of the same family are likely to have the same habits. There is more litter in some communities than in others. There are probably social, economic, regional, sex, and age factors related to litter production, just as there are surely seasonal variations in the amount of litter produced. These variables need to be identified. Pin maps showing pounds or bushels of litter per capita by areas might be illuminating in a study of the epidemiology of litter.

It is not sufficient to assume that general programs of education, publicity, and propaganda, or appeals to pride and pocketbook, or stricter laws better enforced will prevent litter over the long run. With litter, as with any other public health hazard, we cannot plan and focus programs of prevention until we have more information than we have now as to its causative factors.

The public health profession is uniquely equipped to solve some of the basic questions. Meantime it will have to deal with the problem of litter by empirical methods of law enforcement and education, just as it had to deal with yellow fever, cholera, and typhoid fever before the causes and routes of infection of these diseases were known. In this case, however, it is doubtful that an anti-litter serum can be developed or that if it were developed it would be used by the family physician.

Although the challenge is formidable, empirical methods are already producing remarkable results in many localities.

Philadelphia

In Philadelphia, for example, the junior sanitation unit has given new life to the Philadelphia Clean-Up Committee. The committee's block organization plan had met with little success until the boys and girls were formed into units in the schools by the city's police sanitation officers. Each member pledges to keep himself clean at all times and to aid in keeping his home, school grounds, and neigh-



New York Times photograph

Litter and rubbish in a 20-by-100-foot lot in Brooklyn presented not only an eyesore but a fire and safety hazard to the neighborhood.



New York Times photograph

The lot became a garden of flowers, shrubs, and vegetables, with a 10-foot maple tree, after transformation by school children.

borhood neat and litter free. Saturday mornings as their neighbors watch, the junior sanitation "cleaner-uppers"—who are easily identified by their white caps lettered "clean up"—work with verve and pride. Their contribution is not only material but inspirational as it stirs parents and neighbors to join in the crusade.

Today, Philadelphia has more than 975 organized blocks where flowers bloom in doorway and backyard gardens, in porch boxes and fence boxes, and even in sidewalk boxes—concrete troughs set against the houses and planted with climbing roses to brighten the once shabby streets. Block captains, a new aristocracy of citizens, work seriously, diligently, and enthusiastically with their groups, sparked with the contagious zeal of youth. The junior sanitation unit will also prove to be a reservoir of future leadership in the anti-litter movement.

Savannah

Savannah, Ga., started with a women's committee; a caricature of "Pelican Pete," a bird indigenous to the Georgian coast that could be used as a symbol to speak for the committee; and 30,000 litterbags which had been donated by a paper corporation. The slogan was Keep Beautiful Savannah Clean.

The litterbags created enough interest so that when trash receptacles in which to place them

after use were needed, individuals and business firms contributed them willingly. Window stickers of Pelican Pete were distributed, and 10,000 automobile stickers were given out by gas stations and banks. Silver cups were awarded to schools where the grounds were improved. So dedicated were boys and girls in the cleanup movement that mothers who became anti-litter committee members testified at meetings that no longer would they dare to throw trash from car windows lest they incur junior's censure.

Enlisting aid from all sources—civic, service, and fraternal organizations, and business and industry—the committee also appeared before the city council, county commissioners, police department, and health and sanitation department to ask their cooperation. Their efforts have brought about ordinance changes as well as all-out support of the community's continuing anti-litter program.

Indianapolis

"Yard Parks," Indianapolis' title for the year-round litter control program, is structured in special divisions with a "trouble-shooter" for each to investigate public complaints and take proper action. The divisions, such as allied florists, drug stores, and public health, make Yard Parks an integral part of all community activities, enlisting the support of every citizen

through his work, organization membership, or hobbies.

Litter prevention is being taught as the "yards beautiful" course in all public, parochial, and private schools in the city and county with full support of the educational phase by community groups and PTA units.

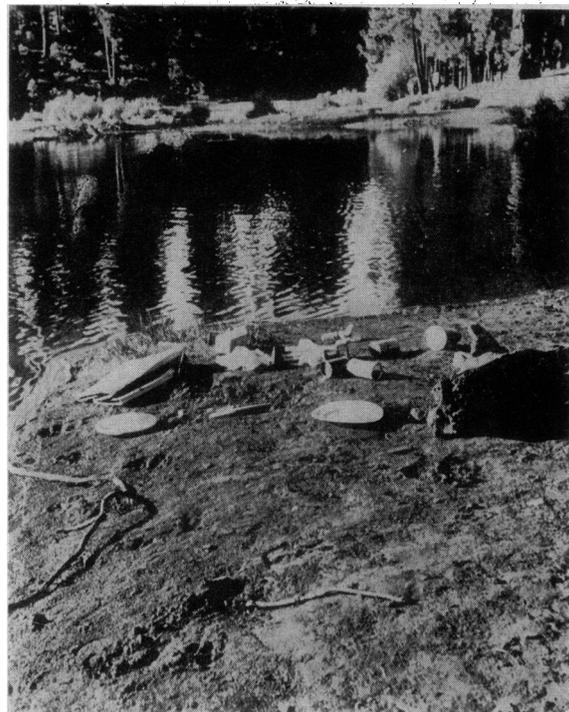
San Antonio

San Antonio, Tex., long famed throughout the country for its palm-lined avenues of lovely homes and artistically landscaped parks, deteriorated during World War II into a ghost of its former beauty. Littered streets, run-down houses with unkempt lawns, weed-grown lots, and neglected parks where plants and shrubs had been allowed to die had changed the face of the city.

Littering had become communicable. Lack of civic pride and indifference were deeply entrenched in the public consciousness. No civic group came forward. One man, O. P. Schnabel, spearheaded the movement to check littering. With very little support he called on the newspapers, radio, and television stations to arouse the citizenry. Some financial help came from business firms aware of the potential value of a clean city.

Throughout San Antonio were heaps of accumulated household trash. As no regular trash removal was made by the city, Mr. Schnabel and his committee initiated an annual trash haul. Private firms donated a truck and helpers, and in the first year, 1949, thousands of tons of trash were removed from homes and yards. These annual hauls not only saved citizens a million dollars in private trash-toting fees, but awakened them to the realization that their town was depreciating. More residents joined the campaign, and in 1951 San Antonio won its first National Cleanest Town Award in a contest sponsored by the National Clean Up, Paint Up, Fix Up Bureau in Washington, D.C. Since then, San Antonio has won an award every year, receiving the National Grand Award in 1954.

Today there is a Beautify San Antonio Association which cooperates with the chamber of commerce and other public and civic organiza-



Dunsmuir News photograph

Littered shoreline blights a beauty spot along California's McCloud River. Thousands of youth and adult groups have joined the movement to enhance and preserve the Nation's scenic beauty.

tions. More than 750 trash cans have been placed at strategic locations to encourage citizens to keep streets and parks clean. Elementary and high school students have conducted essay and poster contests and devised school checklists which have resulted in cleaner school grounds. Homes have been beautified through pressure exerted by children upon their parents. The city health department regularly notifies owners of unkempt lots. If the owners fail to respond, the department cleans up the debris and bills them for the cost.

As a long-range plan for making America litter free, officials of the Beautify San Antonio program advocate that future automobiles should have built-in trash receptacles. They believe that 90 percent of Americans will cooperate if they have a place to deposit litter while driving. Meantime, they are encouraging the use of disposable litterbags and other portable containers.

Four-Point Formula

These four cities are not unique. Each became aware that it was faced with a problem, and met the situation as it best suited the individuality and resources of the community. These and other cities, currently dedicated to the fight against litter, are finding effective the four-point formula for litter prevention of Keep America Beautiful. It includes:

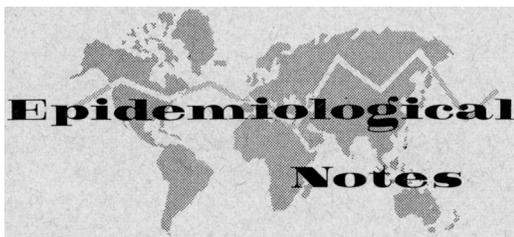
- Public education to cultivate individual responsibility, civic pride, and good citizenship habits.
- Participation in public interest projects for cleaner, more attractive surroundings.
- Adequate collection and disposal facilities.
- Adoption and proper enforcement of State

and local legislation to penalize willful offenders.

There is no magic formula for any city; but the plan most likely to succeed is a full-time, continuous program of litter control supported by all the interested groups in the community, with the full cooperation and participation of government.

If communities throughout the country join the effort, perhaps in succeeding generations the "inherited" tendency toward the disease of litter will be markedly reduced.

Project guides for leaders on various phases of litter prevention are available from Keep America Beautiful, Inc., 99 Park Avenue, New York 16, N.Y.



Rabies

Although only six cases of rabies in man were reported in 1958, it is worth noting that half of them were traced to bites by animals other than dogs. One case each was traced to a bite by a skunk, a fox, and a bat. This is a slightly higher proportion of infections from wildlife sources than for the previous 5 years. The relatively lesser importance of dogs in the etiology of infection in man parallels the decline in number of rabid dogs reported and an increasing number of rabies infections reported in wild animals. About 1940, 85 percent of all cases of animal rabies reported were in dogs and about 3 percent in wild animals. Since that time, cases of rabies in dogs have declined nearly 65 percent, while in wild animals there has been almost a tenfold increase in numbers reported.

The measures for control of rabies in dogs are well established; vaccination and elimination of stray dogs. On the other hand, the complex problem of controlling infection in wild animals continues to be formidable. The apparently increasing amount of rabies in wildlife is a threat not only to the health of man but also to domestic animals. The annual economic loss in cattle and horses infected with rabies by wild animals is considerable.

The extent of the task of preventing rabies in man cannot be measured by the small number of deaths. Any calculations must include the approximately 60,000 persons who receive injections of vaccine annually because of exposure to rabid animals or to animals suspected of having rabies. Investigations have been underway to develop vaccines that will not induce serious reactions but will stimulate adequate antibody responses. The optimum use of hyperimmune serum is being studied, and the development of a gamma globulin is regarded as a possibility. Pre-exposure vaccination is being considered for certain individuals, such as veterinarians and mailmen who often have contact with biting dogs.—
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